

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
	)	
Modification of Parts 2 and 15 of the	)	ET Docket No. 03-201
Commission's Rules for Unlicensed devices	)	
and equipment approval.	)	

**COMMENTS OF DELL INC.**

Dell appreciates the opportunity to provide comments in support of this Notice of Proposed Rule Making (NPRM) in the above-referenced proceeding. Dell fully supports this NPRM and believes that it represents a significant step to accommodate regulatory policy towards the accelerating pace of technical innovation in the market for unlicensed devices. It is apparent that the Commission fully understands and supports the rapidly growing market for unlicensed devices and is paving the way for further industry innovation, while preserving the need to public interest and safety.

**Proposed Revisions to Part 15**

**1. Advanced Antenna Technologies**

1. Dell supports the Commission proposal to allow higher power point-to-multipoint transmission systems using sectorized or phased array antennas, provided however that these systems operate in a fashion such that the power complies with the existing field strength requirements established in applicable sections of Part 15. These new rules will allow for better device performance while using available spectrum with more efficiency.

2. Dell's only comment on this topic is that characteristics of a system should not be defined so tightly to stifle innovation of current or future antenna technologies.

**2. Replacement Antennas for Unlicensed Devices**

3. The NPRM states in paragraph 17:

*"...Any antenna of a similar type that does not exceed the antenna gain of tested antennas may be used without retesting. Use of an antenna of a different type than the tested antenna (i.e. yagi antenna vs. a horn antenna) or one that exceeds the gain of a tested antenna would require*

*retesting and new approval by either a Telecommunication Certification Body or the Commission.”<sup>1</sup>*

4. Dell seeks clarification on the use of the term antenna “TYPE” in reference to proposed changes to FCC section 15.203. The NPRM is focused on Access Point considerations while client side radios are affected by the same rules. In the laptop client radio industry the term antenna “TYPE” can be interpreted by a Telecommunication Certification Body (“TCB”) as a different material make up and not necessarily a different antenna pattern and gain as alluded to in this section. Dell recommends using antenna pattern and gain as the basis for evaluating the equivalence of replacement antennas rather than the physical make up and configuration of the antenna. This evaluation method would address both the Access Point and client market for antenna rules.

## **5. Frequency Hopping Channel Spacing Requirements**

Dell Supports the proposed changes to allow for improved opportunities for frequency hopping systems to adaptively avoid interfering signals from other systems. There will be more hopping channels available under the 2/3 bandwidth rule compared to the present rules.

Dell would additionally request that the Class I Permissive Change process be applied where signal and power characteristics meet the exclusion limits and the adjustments can be made with a firmware/software update only.

## **6. Part 15 Unlicensed Modular Transmitter Approvals**

In paragraph 33, the NPRM defines a transmitter as consisting of two basic components: the “radio front end” or radio elements and the “firmware” or specific hardware on which the software that controls the radio operation resides. Dell understands the need to define these elements as a reference, but urges not to limit innovative technical development with the restriction endorsed by this definition. Alternatively, Dell urges for some flexibility in demonstrating compliance with FCC rules in definition and in compliance as defined in paragraphs 38 and 41. An alternative approach would be to allow for more or different divisions in the modular components while maintaining an understanding of the overall compliance of the radio system.

## **CONCLUSION**

Dell appreciates the opportunity to provide our views in this important proceeding. Dell believes that the Commission’s proposed rule changes are critical to continuing the advancement of consumer interests and are in alignment with information that has been

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<sup>1</sup>

developed from the industry and the FCC in recent months. Dell urges that FCC to act quickly in these regards and enact changes as well as enforcement policies with appropriate due diligence.

Respectfully Submitted

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